

=====

Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: markspencer

Timestamp: [year=2010; month=2; day=4; hr=14; min=22; sec=37; ms=711;]

=====

Application No: 09501102 Version No: 3.0

Input Set:

Output Set:

Started: 2010-02-03 15:45:45.534
Finished: 2010-02-03 15:45:49.979
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 445 ms
Total Warnings: 52
Total Errors: 9
No. of SeqIDs Defined: 52
Actual SeqID Count: 52

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)

Input Set:

Output Set:

Started: 2010-02-03 15:45:45.534
Finished: 2010-02-03 15:45:49.979
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 445 ms
Total Warnings: 52
Total Errors: 9
No. of SeqIDs Defined: 52
Actual SeqID Count: 52

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20) This error has occurred more than 20 times, will not be displayed
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (21)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (23)
E 322	CDS location out of range SEQID (41) At Protien count (133)
E 322	CDS location out of range SEQID (43) At Protien count (136)

SEQUENCE LISTING

<110> Co, Man Sung
 Vasquez, Maximiliano
 Carreno, Beatriz
 Celniker, Abbie Cheryl
 Collins, Mary
 Goldman, Samuel
 Gray, Gary S.
 Knight, Andrea
 O'Hara, Denise
 Rup, Bonita
 Veldman, Geertruida M.

<120> HUMANIZED IMMUNOGLOBULIN REACTIVE WITH B7-2 MOLECULES AND METHODS OF TREATMENT THEREWITH

<130> 08702.0081-00000

<140> 09501102

<141> 2000-02-09

<150> 09/249,011

<151> 1999-02-12

<160> 52

<170> PatentIn version 3.1

<210> 1

<211> 405

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(405)

<223> Murine anti-B7-2 heavy chain

<400> 1

atg ggt tgg aac tgt atc atc ttc ttt ctg gtt aca aca gct aca ggt 48

Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly
 1 5 10 15

gtg cac tcc cag gtc cag ctg cag cag tct ggg cct gag ctg gtg agg 96

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg
 20 25 30

cct ggg gaa tca gtg aag att tcc tgc aag ggt tcc ggc tac aca ttc 144

Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe
 35 40 45

act gat tat gct ata cag tgg gtg aag cag agt cat gca aag agt cta 192

Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu
 50 55 60

gag tgg att gga gtt att aat att tac tat gat aat aca aac tac aac 240

Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn

65	70	75	80	
cag aag ttt aag ggc aag gcc aca atg act gta gac aaa tcc tcc agc				288
Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser				
	85	90	95	
aca gcc tat atg gaa ctt gcc aga ttg aca tct gag gat tct gcc atc				336
Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile				
	100	105	110	
tat tac tgt gca aga gcg gcc tgg tat atg gac tac tgg ggt caa gga				384
Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly				
	115	120	125	
acc tca gtc acc gtc tcc tca				405
Thr Ser Val Thr Val Ser Ser				
	130	135		

<210> 2
 <211> 135
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Murine anti-B7-2 heavy chain

<400> 2

Met Gly Trp Asn Cys Ile Ile Phe Phe Leu Val Thr Thr Ala Thr Gly				
1	5	10	15	
Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Arg				
	20	25	30	
Pro Gly Glu Ser Val Lys Ile Ser Cys Lys Gly Ser Gly Tyr Thr Phe				
	35	40	45	
Thr Asp Tyr Ala Ile Gln Trp Val Lys Gln Ser His Ala Lys Ser Leu				
	50	55	60	
Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn				
65	70	75	80	
Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Ser Ser				
	85	90	95	
Thr Ala Tyr Met Glu Leu Ala Arg Leu Thr Ser Glu Asp Ser Ala Ile				
	100	105	110	

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
 115 120 125

Thr Ser Val Thr Val Ser Ser
 130 135

<210> 3
 <211> 396
 <212> DNA
 <213> Artificial Sequence
 <220>
 <221> CDS
 <222> (1)..(396)
 <223> Murine anti-B7-2 light chain

<400> 3
 atg gat tca cag gcc cag gtt ctt ata ttg ctg ctg cta tgg gta tct 48
 Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
 1 5 10 15
 ggt acc tgt ggg gac att gtg ctg tca cag tct cca tcc tcc ctg gct 96
 Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
 20 25 30
 gtg tca gca gga gag aag gtc act atg agc tgc aaa tcc agt cag agt 144
 Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
 35 40 45
 ctg ctc aac agt aga acc cga gag aac tac ttg gct tgg tac cag cag 192
 Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
 50 55 60
 aaa cca ggg cag tct cct aaa ctg ctg atc tac tgg gca tcc act agg 240
 Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
 65 70 75 80
 gaa tct ggg gtc cct gat cgc ttc aca ggc agt gga tct ggg aca gat 288
 Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
 85 90 95
 ttc act ctc acc atc agc agt gtg cag gct gaa gac ctg gca gtt tat 336
 Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
 100 105 110
 tac tgc acg caa tct tat aat ctt tac acg ttc gga ggg ggg acc aag 384
 Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys
 115 120 125
 ctg gaa ata aaa 396
 Leu Glu Ile Lys
 130

<210> 4

<211> 132
 <212> PRT
 <213> Artificial Sequence

 <220>
 <223> Murine anti-B7-2 light chain

 <400> 4

Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
 1 5 10 15

Gly Thr Cys Gly Asp Ile Val Leu Ser Gln Ser Pro Ser Ser Leu Ala
 20 25 30

Val Ser Ala Gly Glu Lys Val Thr Met Ser Cys Lys Ser Ser Gln Ser
 35 40 45

Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
 50 55 60

Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
 65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp
 85 90 95

Phe Thr Leu Thr Ile Ser Ser Val Gln Ala Glu Asp Leu Ala Val Tyr
 100 105 110

Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gly Gly Thr Lys
 115 120 125

Leu Glu Ile Lys
 130

<210> 5
 <211> 405
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(405)
 <223> Humanized murine anti-human B7-2 heavy chain

<400> 5
 atg ggt tgg aac tgt atc atc ttc ttt ctg gtt acc aca gct aca ggt

Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asp Tyr Ala Ile Gln Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
50 55 60

Glu Trp Ile Gly Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn
65 70 75 80

Gln Lys Phe Lys Gly Lys Ala Thr Met Thr Val Asp Lys Ser Thr Ser
85 90 95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Ala Ala Trp Tyr Met Asp Tyr Trp Gly Gln Gly
115 120 125

Thr Leu Val Thr Val Ser Ser
130 135

<210> 7
<211> 396
<212> DNA
<213> Artificial Sequence
<220>
<221> CDS
<222> (1)..(396)
<223> Humanized murine anti-human B7-2 light chain

<400> 7
atg gat tca cag gcc cag gtt ctt ata ttg ctg ctg cta tgg gta tct 48
Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Trp Val Ser
1 5 10 15
ggc acc tgt ggg gac att gtg ctg aca cag tct cca gat tcc ctg gct 96
Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala
20 25 30
gta agc tta gga gag agg gcc act att agc tgc aaa tcc agt cag agt 144
Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser
35 40 45
ctg ctc aac agt aga acc cga gag aac tac ttg gct tgg tac cag cag 192
Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
50 55 60
aaa cca ggg cag cct cct aaa ctg ctg atc tac tgg gca tcc act agg 240
Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
65 70 75 80
gaa tct ggg gtc cct gat cgc ttc agt ggc agt gga tct ggg aca gat 288

Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

ttc act ctc acc atc agc agt ctg cag gct gaa gac gtg gca gtt tat 336
Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
100 105 110

tac tgc acg caa tct tat aat ctt tac acg ttc gga cag ggg acc aag 384
Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys
115 120 125

gtg gaa ata aaa 396
Val Glu Ile Lys
130

<210> 8

<211> 132

<212> PRT

<213> Artificial Sequence

<220>

<223> Humanized murine anti-human B7-2 light chain

<400> 8

Met Asp Ser Gln Ala Gln Val Leu Ile Leu Leu Leu Leu Trp Val Ser
1 5 10 15

Gly Thr Cys Gly Asp Ile Val Leu Thr Gln Ser Pro Asp Ser Leu Ala
20 25 30

Val Ser Leu Gly Glu Arg Ala Thr Ile Ser Cys Lys Ser Ser Gln Ser
35 40 45

Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu Ala Trp Tyr Gln Gln
50 55 60

Lys Pro Gly Gln Pro Pro Lys Leu Leu Ile Tyr Trp Ala Ser Thr Arg
65 70 75 80

Glu Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp
85 90 95

Phe Thr Leu Thr Ile Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr
100 105 110

Tyr Cys Thr Gln Ser Tyr Asn Leu Tyr Thr Phe Gly Gln Gly Thr Lys
115 120 125

Val Glu Ile Lys
130

<210> 9
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<221> CDS
<222> (1)..(15)
<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<400> 9
gat tat gct ata cag 15
Asp Tyr Ala Ile Gln
1 5

<210> 10
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR1 of humanized murine anti-human B7-2 heavy chain

<400> 10

Asp Tyr Ala Ile Gln
1 5

<210> 11
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> CDR2 of humanized murine anti-human B7-2 heavy chain

<221> CDS
<222> (1)..(51)

<400> 11
gtt att aat att tac tat gat aat aca aac tac aac cag aag ttt aag 48
Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys
1 5 10 15

ggc 51
Gly

<210> 12
<211> 17
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR2 of humanized murine anti-human B7-2 heavy chain

<400> 12

Val Ile Asn Ile Tyr Tyr Asp Asn Thr Asn Tyr Asn Gln Lys Phe Lys
1 5 10 15

Gly

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<221> CDS
<222> (1)..(21)

<400> 13
gcg gcc tgg tat atg gac tac 21
Ala Ala Trp Tyr Met Asp Tyr
1 5

<210> 14
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> CDR3 of humanized murine anti-human B7-2 heavy chain

<400> 14

Ala Ala Trp Tyr Met Asp Tyr
1 5

<210> 15
<211> 51
<212> DNA
<213> Artificial Sequence

<220>
<223> CDR1 of humanized murine anti-human B7-2 light chain

<221> CDS
 <222> (1)..(51)

<400> 15
 aaa tcc agt cag agt ctg ctc aac agt aga acc cga gag aac tac ttg 48
 Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu
 1 5 10 15

gct 51
 Ala

<210> 16
 <211> 17
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR1 of humanized murine anti-human B7-2 light chain

<400> 16
 Lys Ser Ser Gln Ser Leu Leu Asn Ser Arg Thr Arg Glu Asn Tyr Leu
 1 5 10 15

Ala

<210> 17
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> CDR2 of humanized murine anti-human B7-2 light chain

<221> CDS
 <222> (1)..(21)

<400> 17
 tgg gca tcc act agg gaa tct 21
 Trp Ala Ser Thr Arg Glu Ser
 1 5

<210> 18
 <211> 7
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> CDR2 of humanized murine anti-human B7-2 light chain

<400> 18

Trp Ala Ser